

**Tenth NASA Goddard Conference on Mass Storage Systems and Technologies**  
in cooperation with the  
**Nineteenth IEEE Symposium on Mass Storage Systems**

University of Maryland University College Conference Center, College Park MD, USA

**Program Agenda**

MONDAY, APRIL 15, 2002

8:00 AM - 12:30 PM ***Tutorial Registration***

**Tutorial 1** (Session Chair: *P C Hariharan, System Engineering and Security, Inc.*)

8:50 - 9:00 Announcements and Welcoming Remarks

9:00 - 10:30 Perpendicular Recording: A Future Technology or a Temporary Solution,  
*Dmitri Litvinov and Sakhrat Khizoev (Seagate Research)*

10:30 - 11:00 ***BREAK***

**Tutorial 2** (Session Chair: *Jim Hughes, Storage Tek*)

11:00 - 12:30 Storage Virtualization, *Peter Rigsbee(Storage Tek)*

12:30 - 1:30 ***LUNCH***

**Tutorial 3** (Session Chair: *Jack Cole, Army Research Laboratory*)

1:30 - 3:00 IP Storage, *Julian Satran (IBM Research Lab, Haifa, Israel)*

3:00 - 3:30 ***BREAK***

**Tutorial 4** (Session Chair: *P C Hariharan, System Engineering and Security, Inc.*)

3:30 - 5:00 OSD: A Tutorial on Object Storage Devices, *Tom Ruwart (Ciprico)*

5:00 - 7:30 ***Welcome Reception and Conference Registration***

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TUESDAY, APRIL 16, 2002

8:00 AM - 11:00 AM *Continental Breakfast*

8:00 AM - 4:00 PM *Conference Registration*

10:30 AM - 9:00 PM *Vendor Expo*

**Morning Session I - Announcements and Keynote** (Session Chair: *Ben Kobler, NASA Goddard Space Flight Center*)

9:00 - 9:15 Announcements, *Ben Kobler (NASA Goddard Space Flight Center)*

9:15 - 9:30 Welcoming Remarks, *Milt Halem (NASA Goddard Space Flight Center)*

9:30 - 10:30 Keynote Address: Storage Industry Trends, *Matt O'Keefe, Sistina Software*

10:30 - 11:00 **BREAK**

**Morning Session II - Network Storage 1** (Session Chair: *Rodney Van Meter, Nokia*)

11:00 - 11:30 IP Storage: The Challenge Ahead, *Prasenjit Sarkar (IBM Almaden Research)*

11:30 - 12:00 File Virtualization with DirectNFS, *Anupam Bhide (Calsoft Private Limited, India)*

12:00 - 12:30 Building a Single Distributed File System from Many NFS Servers, *Dan Muntz (Hewlett Packard Labs)*

12:30 - 2:00 **LUNCH**

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TUESDAY, APRIL 16, 2002

**Afternoon Session I - HSM 1** (Session Chair: *Reagan Moore, San Diego Supercomputer Center*)

- 2:00 - 2:30 High Performance RAIT, *Jim Hughes (Storage Tek)*
- 2:30 - 3:00 Conceptual Study of Intelligent Data Archives of the Future, *HK Ramapriyan (NASA/GSFC)*
- 3:00 - 3:30 Storage Issues at NCSA: How to get file systems going wide and fast within and out of large scale Linux cluster systems, *Michelle Butler (NCSA)*
- 3:30 - 4:00 **BREAK**

**Afternoon Session II - Short Papers** (Session Chair: *Robert Chadduck, National Archives and Records Administration*)

- 4:00 - 4:10 Building a Massive, Distributed Storage Infrastructure at Indiana University, *Anurag Shankar (Indiana University)*
- 4:10 - 4:20 High Density Holographic Data Storage with Random Encoded Reference Beam, *Vladimir Markov (MetroLaser, Inc.)*
- 4:20 - 4:30 iSCSI Initiator Design and Implementation Experience, *Kalman Meth (IBM Haifa Research Lab, Israel)*
- 4:30 - 4:40 Efficiently Scheduling Tape-resident Jobs, *Jing Shi (Tsinghua University, Beijing, China)*
- 4:40 - 4:50 The Storage Stability of Metal Particle Media: Chemical Analysis and Kinetics of Lubricant and Binder Hydrolysis, *Kazuko Hanai (Fuji Photo Film, Japan)*
- 4:50 - 5:00 Java and Real Time Storage Applications, *Janet Borzuchowski (Storage Tek)*

**Afternoon Session III - Extemporaneous Talks** (Session Chairs: *Gene Harano, National Center for Atmospheric Administration, Jim Hughes, Storage Tek*)

- 5:00 - 6:00 TBD. Speakers will sign up during the conference
- 6:00 - 9:00 **Evening Reception, Poster Session**

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WEDNESDAY, APRIL 17, 2002

8:00 AM - 11:00 AM *Continental Breakfast*

8:00 AM - 4:00 PM *Conference Registration*

8:00 AM - 4:00 PM *Vendor Expo*

**Morning Session I - Potpourri** (Session Chair: *Merritt Jones, MITRE*)

9:00 - 9:30      The Challenges of Magnetic Recording on Tape for Data Storage (The One Terabyte Cartridge and Beyond), *Richard Dee (Storage Tek)*

9:30 - 10:00     Efficient RAID Disk Scheduling on Smart Disks, *Tai Sheng Chang & David H.C. Du (University of Minnesota)*

10:00 - 10:30    Experimentally Evaluating In-Place Delta Reconstruction, *Randal Burns (Johns Hopkins University)*

10:30 - 11:00    **BREAK**

**Morning Session II - Invited Panel: 10 Year Retrospective, 10 Year Prospective**

11:00 - 12:30    Panel Chair: *Mark Ferelli (Westworld Publications)*

Magnetic Tape: *Ted Schwarz (Peregrine Technology Systems)*

Magnetic Disk: *Dmitri Litvinov (Seagate)*

Optical Disc: *Tim Schooler (Plasmon)*

Networked Storage: *Garth Gibson (Carnegie Mellon University & Panasas Inc)*

Storage Security: *Jim Hughes (Storage Tek)*

12:30 - 2:00    **LUNCH**

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**Afternoon Session I - Storage Indexing** (Session Chair: *Ethan Miller, University of Santa Clara, Santa Cruz*)

- 2:00 - 2:30 Intra-file Security for a Distributed File System, *Scott Banachowski (University of California, Santa Cruz)*
- 2:30 - 3:00 Efficient Storage and Management of Environmental Information, *Nabil Adam (Rutgers University)*
- 3:00 - 3:30 Indexing and Selection of Data Items in Huge Data Sets by Constructing and Accessing Tag Collections, *Sebastien Ponce (CERN - EPFL)*
- 3:30 - 4:00 **BREAK**

**Afternoon Session II - Vendor Solutions** (Session Chair: *Bruce Rosen, NIST*)

- 4:00 - 4:10 DIR-2000, 1 Gbit/sec Data Recorder for VERA Project, *Tony Sasanuma (Sony Broadband Solutions Network Company)*
- 4:10 - 4:20 StorageNet 6000 - A Storage Domain Manager, *Peter Rigsbee (Storage Tek)*
- 4:20 - 4:30 Impact of Optical Servers and Storage Systems on I/O Bottleneck and Server Consolidation, *Geoff Barrall (BlueArc)*
- 4:30 - 4:40 Accelerating Data through the Fabric, *Brad Winett (DataDirect Networks)*
- 4:40 - 4:50 Locking Up Your Storage Network - Making SANs Secure, *Kamy Kavarian (Brocade)*
- 4:50 - 5:00 EMC Concurrent Access and Virtualization Solutions, *Jim Young & Mike Quinn (EMC)*
- 5:00 - 5:10 Optimizing SAN Performance, *Robert Pulley (SANavigator)*

**Afternoon Session III - Extemporaneous Talks** (Session Chairs: *Gene Harano, National Center for Atmospheric Administration, Jim Hughes, Storage Tek*)

- 5:10 - 6:00 TBD. Speakers will sign up during the conference

**Evening Reception and Dinner**

- 6:00 - 7:00 Cocktail reception
- 7:00 - 8:00 Dinner
- 8:00 - 9:00 Computer Vision, Visual and Multimedia Technology, and Robotics, *Takeo Kanade (Carnegie Mellon University)*

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THURSDAY, APRIL 18, 2002

8:00 AM - 11:00 AM *Continental Breakfast*

8:00 AM - 12:00 Noon *Conference Registration*

8:00 AM - 3:00 PM *Vendor Expo*

**Morning Session I - HSM 2** (Session Chair: *Jack Cole, Army Research Laboratory*)

9:00 - 9:30 Data Placement for Tertiary Storage, *Jiangtao Li & Sunil Prabhakar (Purdue University)*

9:30 - 10:00 Storage Resource Managers: Middleware Components for Grid Storage, *Arie Shoshani (Lawrence Berkeley National Lab)*

10:00 - 10:30 Storage Area Networks and the High Performance Storage System, *Harry Hulen (IBM)*

10:30 - 11:00 **BREAK**

**Morning Session II - Network Storage 2** (Session Chair: *Jim Hughes, Storage Tek*)

11:00 - 12:30 Introducing a Flexible Data Transport Protocol for Network Storage Applications, *Patrick Beng T Khoo (Data Storage Institute Singapore)*

11:00 - 12:30 Point-in-Time Copy: Yesterday, Today and Tomorrow, *Alain Azagury (IBM Research Lab, Haifa, Israel)*

11:00 - 12:30 Locating Logical Volumes in Large Scale Networks, *Magnus Karlsson (Hewlett Packard Labs)*

12:30 - 1:30 **LUNCH**

**Afternoon Session I - Vendor Interoperability Lab** (Session Chair: *John Berbert, NASA Goddard Space Flight Center*)

1:30 - 3:00 TBD. Vendors will sign up during the conference

3:00 Conference Adjourns